

Abstract

In a known method for regulating a delivery variable ( $H$ ;  $Q$ ) of a pump, which is driven by an electric motor operated with alternating current of variable frequency, especially via a converter, the input power ( $P$ ) of the motor is measured as the actual value for the delivery variable and is regulated by comparison with a desired value ( $P_{des}$ ). To avoid the influence of the temperature of the motor on the delivery variable at constant input power, according to the invention upon a change in the temperature ( $T$ ) in the motor a corresponding compensating variable ( $\Delta P$ ;  $\Delta H$ ) is taken into account in the control for the purposes of correcting the input power ( $P$ ).

An alternative to this solution consists in that associated values of the input power ( $P$ ) and the speed ( $n$ ) of the motor at a predetermined desired pressure value ( $H_{des}$ ) are determined empirically and stored as a table, and that during operation a value of the input power ( $P$ ) belonging to a measured or approximately calculated speed ( $n$ ;  $n_a$ ) of the motor is retrieved from the table as desired value ( $P_{des}$ ) for regulating the input power.

Fig. 4.

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### Abstract of the Disclosure

In a known method for regulating a delivery variable of a pump, which is driven by an electric motor operated with alternating current of variable frequency, especially via a converter, the input power of the motor is measured as the actual value for the delivery variable and is regulated by comparison with a desired value. To avoid the influence of the temperature of the motor on the delivery variable at constant input power, according to the invention upon a change in the temperature in the motor a corresponding compensating variable is taken into account in the control for the purposes of correcting the input power. As an alternative, associated values of the input power and the speed of the motor at a predetermined desired pressure value are determined empirically and stored as a table, and during operation a value of the input power belonging to a measured or approximately calculated speed of the motor is retrieved from the table as the desired value for regulating the input power.

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